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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,966	10/12/2001	Tadashi Takeuchi	Q66516	8112

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SUGHRUE, MION, ZINN, MACPEAK & SEAS
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EXAMINER

KOVAL, MELISSA J

ART UNIT PAPER NUMBER

2851

DATE MAILED: 02/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/974,966

Applicant(s)

TAKEUCHI, TADASHI

Examiner

Melissa J Koval

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-19 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show casing 10 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the casing 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly

those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it exceeds 150 words.

Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: On page 10, line 19 of the specification, casing 10 is referred to with respect to Figure 4, but it is not shown in the Figure.

Appropriate correction is required.

Claim Objections

Claim 5 is objected to because of the following informalities: the phrase "wherein an angle an optical axis of an incident light beam" is grammatically incorrect and difficult to understand. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 through 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Uchiyama.

Refer to Figures 1 and 2 of Uchiyama, for example.

Claim 1 sets forth: "A rear projection television comprising:

a casing (casing 2) having a projection screen., said projection screen constituting a front face of said casing (picture screen 3);

a projector provided within said casing for emitting a light beam containing an image information (optical system 7); and an end side reflection mirror provided within said casing in the vicinity of an end portion of said projection screen (reflective mirror 15a), for reflecting said light beam emitted from said projector toward a whole rear surface of said screen as an incident light beam, said end side reflection mirror being arranged such that an optical axis of said incident light beam incident on said end side

reflection mirror is slanted toward said screen to gradually reduce a distance between said optical axis and said screen."

Claim 3 sets forth: "A rear projection television as claimed in claim 1, further comprising a rear side reflection mirror (reflective mirror 15b) provided within said casing on a rear side thereof, said rear side reflection mirror being adapted to reflect the light beam emitted by said projector to produce the incident light beam."

With respect to claim 4, although Uchiyama does not specify the degree of the angular relationship between the reflective mirror 15b and the projection screen 3, it is clear from reviewing Figures 1 and 2 of Uchiyama that the relationship between said elements falls within the range set forth in the limitations of claim 4.

Claim 5 is met by Uchiyama as far as the terms and limitations of the claim can be understood.

Claim 6 is met by Figure 2 of Uchiyama.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 11 through 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchiyama in view of Negishi et al.

Uchiyama et al. teach all of the limitations set forth in claim 2 except for a focusing optical part comprised of a plurality of focusing mirrors. The optical system 7 of Uchiyama is structured differently and can be seen in Figure 1, for example.

However, a focusing optical part comprised of a plurality of mirrors is well-known in the art as shown by Negishi et al. in the embodiment of Figure 6.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute one type of optical system, that shown by Negishi et al., for another, that shown by Uchiyama, in a rear projection system, thus meeting the limitations set forth in claim 2. The motivation for one having ordinary skill in the art to make such a modification would be to implement a rear projection display apparatus reduced in thickness.

Claim 14 is met for the reasons already applied above in the rejection of claim 2.

With respect to claim 13, Negishi et al. acknowledge that DMD devices are well known in the art for use as imaging devices in projection displays in "The Background of the Invention".

With respect to claims 11, 12 and 15 through 19, refer to Figure 6 of Negishi et al. Also refer to column 41, lines 6 through 30.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchiyama in view of Goldenberg et al. or Yoshida et al.

Uchiyama teaches all of the limitations of claim 8, except that the structure of the screen is not described in detail.

Both Goldenberg et al. and Yoshida et al. show various embodiments for rear projection screens wherein the structure of the screen comprises a Fresnel lens and a lenticular lens combination.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute a screen comprising both a Fresnel lens and a lenticular lens as shown by either Goldenberg et al. or Yoshida et al. for the picture screen 3 shown by Uchiyama, thus meeting the limitations of claim 8. The motivation for one having ordinary skill in the art to make such a substitution would be to achieve a rear projection system having improved quality, without the drawbacks of speckle or poor contrast, for example.

Claims 9 and 10 are rejected for the same reasons already applied to rejected claim 8.

Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art neither shows nor suggests a direct relationship between the depth of the casing and the size of screen diagonal as a design feature for the projection apparatus.

Conclusion

The art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ogawa U.S. Patent 6,513,935 B2 teaches a lens-less projection optical system of reflection type.

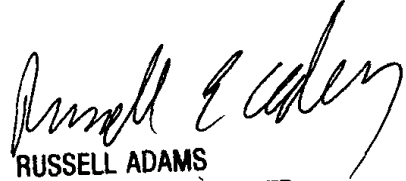
Kurematsu et al. U.S. Patent Application Publication US 2002/0057421 A1 teaches a display apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa J Koval whose telephone number is (703) 308-4801. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell Adams can be reached on Monday through Thursday at (703) 308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MJK
February 5, 2003


RUSSELL ADAMS
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